

THE ROLE OF FOREIGN DIRECT INVESTMENT IN KEDAH DARUL AMAN

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Abstrak: Kegiatan-kegiatan pelaburan langsung asing (PLA) di negeri Kedah adalah nyata sekali dalam sektor pembuatan, yang mana merupakan sektor paling dinamik bagi ekonomi Kedah. Untuk kajian ini, 53 buah syarikat asing di bawah kelolaan Perbadanan Kemajuan Negeri Kedah (PKNK) telah dipilih dengan teliti sebagai responden. Syarikat-syarikat ini berada dalam Estet Perindustrian Kulim, Taman Perindustrian Kulim Hi-Tech, Estet Perindustrian Bakar Arang di Sungai Petani, Estet Perindustrian Tikam Batu dan Taman Perindustrian Darulaman. Namun demikian, maklum balas yang diterima hanyalah 27 buah syarikat (50.9 peratus) sahaja daripada jumlah populasi tersebut. Penemuan utama kajian ini ialah PLA telah memberi sumbangan positif kepada pembangunan ekonomi negeri Kedah. Secara khususnya, sumbangan tersebut terdapat dalam ciri-ciri dan kesan-kesan dalam negeri itu. Ciri-ciri tersebut termasuklah alasan-alasan PLA, saiz pelaburan, jenis aktiviti, ekuiti dan kawalan, pemasaran, pengurusan dan keuntungan; dan kesan-kesan PLA pula termasuklah dari aspek guna tenaga, kemahiran teknikal, latihan, rangkaian dan pindahan teknologi. Walau bagaimanapun, usaha yang lebih giat daripada pihak kerajaan negeri dengan kerjasama semua syarikat asing masih perlu untuk meningkatkan dan memperbaiki peranan FDI dalam sektor pembuatan.

Abstract: Activities of foreign direct investment (FDI) in Kedah state are particularly evident in the manufacturing sector, which is the most dynamic sector of Kedah's economy. For the purpose of this study, 53 foreign companies under the administration of Kedah State Development Corporation (KSDC) were carefully selected as respondents. They are located in Kulim Industrial Estate, Kulim Hi-Tech Industrial Park, Bakar Arang Industrial Estate in Sungai Petani, Sungai Petani Industrial Estate, Tikam Batu Industrial Estate, and Darulaman Industrial Park. However, only 27 companies responded (50.9 per cent) out of the total population. The major finding of this study is that FDI has actually made a positive contribution to the economic development of the state. Specifically, the contribution is reflected in the characteristics and the effects of FDI in the state. The characteristics include reasons of FDI, size of investment, type of activity, equity and control, marketing, management and profitability; while the effects of FDI include employment, technical expertise, training, linkages and transfer of technology. Nevertheless, further efforts from the state government with the cooperation of all the foreign companies themselves are still needed to increase and improve the role of FDI in the manufacturing sector.

INTRODUCTION

The rapid expansion of trade and investment activities has resulted an increasing interdependence among countries. For developing countries, the inflows of FDI through multinational corporations (MNCs) has been attributed to historical colonial relationship with industrialized countries (which act as home countries). These multinationals with capability of their capital resources are expected to promote development and growth of developing countries.

Attitudes toward FDI in developing countries have changed considerably over the last 25 years. In 1970s, their policies are generally aimed at discouraging foreign capital inflows. But the scenario changed sometime in 1980s. More developing countries are prepared to see the positive contributions of FDI and willing to review and implement new policies, and to renew strategies according to what to be achieved by their national objectives.

Like other developing countries, FDI had played an important role in Malaysia's economic development and diversification. The present Malaysia Industrial Development Authority (MIDA) has a very challenging task in handling large inflow of foreign investment into the Malaysian industrial sector. With the help of MIDA, the Malaysian Government provides various policies, incentives and facilities to attract foreign investment in the manufacturing sector. Certain guidelines are prepared by the Government, particularly on foreign equity participation in the manufacturing sector, which is governed by the level of exports.

Kedah is a state where its pattern of economy has changed from its generations-old traditions of agriculture and commerce to a modern industrialization with broadly diversified activities. This progress has been done through a steady program of economic development implemented by the state and with the establishment of the Kedah Development Action Plan (KDAP), 1991-2000. During the Sixth Malaysia Plan (1991-1995), Kedah's economy was expanded with its average Growth Domestic Product of 9.9 per cent. It was higher than the growth rate achieved at national level (8.7 per cent) for the same period (MIDA, 1997).

With regards to foreign direct investments, Kedah has a good record of which a total proposed capital investment in approved projects was over RM16.2 billion for the period 1990-April 1998 (see Table 1). Among foreign investors in Kedah are from Taiwan with 130 companies, Japan with 76 companies, Singapore with 37, the United States with 28, Hong Kong with 25, and Korea, United Kingdom and Germany with 10 each, Canada with 7 and Netherlands with 6 companies. Also presence are from India, Australia, Italy, Indonesia, Switzerland, Thailand and New Zealand. In total, investors from more than 20 countries have the approved manufacturing projects in the state.

Table 1: Foreign Participation in Approved projects in Kedah by Country, 1990 – April 1998

Country	1990 - April 1998		
	Number	Foreign Equity (RM) ²	Foreign Investment (RM) ¹
Australia	3	900,000	2,000,000
Canada	7	3,000,000	29,607,000
Netherlands	6	18,015,000	34,765,000
Hong Kong	25	229,991,500	690,456,320
India	5	2,055,000	4,095,000
Indonesia	2	245,606,000	1,130,033,500
Italy	3	4,450,000	11,950,000
Japan	76	966,206,150	3,546,686,193
Korea, Rep.	10	159,443,500	591,432,352
New Zealand	1	9,720,000	9,720,000
Norway	1	2,405,466	3,121,033
Pakistan	1	0	0
Singapore	37	53,345,322	162,798,082
Switzerland	2	625,600,000	1,876,000,000
Taiwan	130	702,854,100	2,001,708,916
Thailand	2	1,235,000	4,071,200
United Kingdom	10	12,008,000	21,628,444
USA	28	1,755,636,500	3,911,203,080
USA	10	42,923,000	184,933,000
Germany	1	0	0
China	1	202,731,000	1,013,655,000
Iran	1	30,000,000	30,000,000
Saudi Arabia	1	17,153,750	34,307,500
Turkey	17	309,598,879	877,886,189
Others			
ALL	**	5,394,878,167	16,172,048,809

Source: MIDA

Note:

¹ Foreign Investment = foreign equity + loan attributed to foreign interests

² Loan attributed to foreign interests is apportioned from the total loan according to the percentage of the foreign share in the equity of each project

*Expansion of capacities or manufacture of additional products is not involving additional capital

** The numbers of approvals are not totaled to avoid double counting.

PROBLEM STATEMENT

The inflow of Foreign Direct Investment (FDI) into Malaysia on a large scale was a result of the Government's efforts towards economic diversification and industrialization programmes. The most spectacular achievement in the Malaysian economy was the rapid development of the manufacturing sector. This sector had developed at the rate of 12.3 per cent per year for the period of 1991-1993 because of the export-oriented industrialization strategy which was introduced in the Industrial Master Plan (IMP) 1986-1995 (Malaysia, 1993). In 1990, the share of manufactured exports to merchandise exports was 58.8 per cent but it increased to 79.6 per cent in 1995 (MITI, 1996).

Kedah is chosen for the study of FDI and its role to the economic development of the state since it has a great potential for industrial development in the northern region of Malaysia, especially in the long term. The state is making an important progress in lessening its dependency on agricultural sector (Kedah SEDC, 1993). Well provided infrastructure and transportation facilities as well as liberal investment and trade policy have attracted foreign investors from various countries to invest in the state.

It cannot be denied that foreign direct investment is one of many ways to achieve industrial development and consequently contribute towards economic growth for a state and for a country. Job opportunities and increase in income for domestic residents are among the contributions that can be realized with the increased and development of various factories by foreign companies. However, the role of FDI is still questionable in some aspects, which in turn can affect the long-run economic growth. The main question that can be raised here is: What are the characteristics and the effects of FDI on the development of Kedah's industrialization and its economy?

OBJECTIVES

The main objective is to study the role of FDI in the economic development of Kedah Darul Aman. The specific objectives are to examine and evaluate

- a. the characteristics of FDI, namely, reasons for FDI, size of investments, type of activity, equity and control, marketing, management and profitability.
- b. the effects of FDI on employment, training, linkages and the transfer of technology.

LITERATURE REVIEW

Foreign Direct Investment (FDI) is considered as an important international capital movement particularly in the economic development of developing countries. The active role of foreign capital in economic growth is clearly seen in the Newly Industrialized Economies (NIEs) in East Asia, namely South Korea, Taiwan, Singapore and Hong Kong. These countries have high investment activity that contributes to the creation of modern industrial production and the improvement of the utilisation of existing production resources (Piatkin, 1993).

Okposen and Kanbur (1996) examine the causes of FDI inflow in Singapore and discuss the lessons that can be learnt by Malaysia from Singapore's experience. The dominant role of foreign capital in the manufacturing sector is mainly because the Singapore government is independent of local capital. Experience from Singapore could be relevant for Malaysia in at least four aspects. First, the role of the state which is not to hinder development but creates opportunities for economic growth. Even state owned firms would have to compete with all other firms in the industry too. Second, FDI inflow leads to the success of Singapore's economy. TNCs are largely responsible for the development of Singapore through their investment and exports, and through their multiplier effects on the whole economy. Third, the country's comparative advantage never static. In other words, it evolves with capital accumulation and technological change. Finally, the experience proves that a country can achieve rapid development as a net importer of FDI as well as become a major investor.

Zainal Abidin (1990) analysed the trend and profile of FDI in Malaysia, which is based on data of manufacturing projects from 1981 to July 1989. He found that the overall trend of FDIs in the sector had been rather uneven over the years. FDIs were high in 1981 and 1982 but there was a decline during the period 1983-85, which was attributed to the international recession. Relating to the impacts of foreign investment on employment in Malaysia, Yew (1990) however, found that the contribution of foreign-controlled companies to employment in the late 1980s had not been encouraging. In a different paper, Mohd. Ariff (1991) wrote on the changing role of FDI in the Malaysian economy as the country advanced industrially. In the 1960s, the flow of FDI was mainly to import substituting activities (Ariff and Chee, 1987). Later, in the 1970s, there were export-oriented activities with key roles played by Japan, Singapore and the United States. In the first half of the 1980s, the FDI flow was extremely sluggish due to economic recession. However, there has been renewed FDI interest with remarkable increase of foreign investors in the late 1980s.

In a paper written by Rajah, Ishak and Jomo (1996), five economies have been selected to be analysed, namely, Korea, Taiwan, Malaysia, Thailand and Indonesia because of their experienced unprecedented growth and structural transformation. Rajah et. al. point out that the role of FDI in the five economies vary strongly. Korea relies on foreign capital in order to acquire in large-scale

technology know-how from foreign firms. But the direct participation of foreign firms is restricted in the domestic economy, and confined largely to labour-intensive activities. In Taiwan, foreign firms are allowed in more industries. But they are used to generate technology spillovers, and to support the growth of local firms. Unlike Malaysia, Indonesia and Thailand, foreign firms are given little incentives only. Also, they are not allowed in strategic industries.

FDI has been viewed as one important mean to acquire modern technology through the so-called technology transfer. Lall (1996), in his paper, notes that FDI was allowed only where considered necessary, and the government would have to control firmly in local hands. Foreign majority ownership was not permitted except when there is the condition of having access to closely held technologies, or to promote exports in internationally integrated activities.

Tham (1997) narrowly focuses on the contribution of FDI to productivity growth in Malaysia particularly in the manufacturing sector. Total factor productivity (TFP) is basically due to improvements in efficiency in the usage of resources and technical change. Tham's findings, however, show that there has been little growth in TFP in the manufacturing sector. The tendency for FDI in Malaysia to be concentrated in assembly and production, the lack of emphasis on relocating their R&D to this country and the continued dependence on foreign capital for imported intermediate inputs when both production and export of high technology are made possible are among the main reasons for the problem.

METHODOLOGY

Descriptive method is employed in studying and analyzing the role of FDI in Kedah State. Data are put into tables for easier reference. Both primary and secondary data are the sources of data and information.

Primary data for this study was collected using a survey instrument (Questionnaire) developed by researchers. The questionnaire consists of four parts covering aspects such as the general background of companies, employment and training, production and technology, and information on linkages with other companies or industries. The questionnaire is made of mainly multiple choice questions where the company is asked to indicate the most appropriate choices. Some open-ended questions are also included wherever relevant in order to get additional information and comments from the respondents.

Secondary data is also an important input in this study to supplement the primary data. It is gathered from various government publications, reports and other studies on FDI which are available from libraries and government agencies. MIDA were helpful in providing additional data on industries on request.

In order to examine and evaluate the characteristics and the effects of FDI, an official listing of foreign companies in Kedah was obtained from the KSDC. A sample survey was carried on the foreign firms with the help of a structured questionnaire or 'self-administered questionnaire' since most of the questions are supposed to require the respondents to refer to the firm's files or records. Questionnaires were sent earlier to respondents. They were asked to complete it before hand and were informed that the questionnaire would be picked up by the assistant researchers at their premises about two weeks after the questionnaires were sent. Before distributing the questionnaires, a pilot study was conducted on some of the companies operating under the KSDC. In addition to the questionnaire, discussions and interviews with relevant personnel and officers at some of these firms and relevant authorities were also carried out.

The study population is all companies in the industrial areas administered by the KSDC which cover Kulim Industrial Estate, Kulim Hi-Tech Industrial Park, Bakar Arang Industrial Estate in Sungai Petani, Sungai Petani Industrial Estate, Tikam Batu Industrial Estate and Darul Aman Industrial Park.

From this population, industries owned by foreigners were taken into a study sample. Using the method of survey, data relating to the study sample were collected. Various relevant data were collected, including period of establishment, number of employees, and the contributions of foreign companies to the local community. For the specific objectives, data and information on location, date of establishment, number of employees, size of investment and types of activity are among those that were not neglected.

FINDINGS AND DISCUSSION

The first part of this chapter discusses the characteristics of FDI in Kedah including the origin of the companies, and their location in Kedah, reason for choosing the state as investment location, the size and type of investment, equity and control, marketing, and management. The second part discusses the effect of FDI on employment, technical expertise, training, linkages, and technology transfer. The analysis of both parts are using data of the 27 companies responded from the population of 53, a response rate of 50.9 per cent.

1. The Characteristics of FDI in Kedah

Country of Origin and Location

According to MIDA, Taiwan, Japan, and USA are the three biggest contributors of FDI in Kedah. Consistent with these, Table 2 shows that 14 out of the 27 responding firms are Japanese, followed by Taiwan, four, and USA, three firms. In term of location in Kedah, 11 are located in Kulim, seven in

Sungai Petani, four in Tikam Batu, and three in Bakar Arang. Kulim is highly favored by foreign companies because of its close proximity to Penang, and the port. It also offers better infrastructure since it is planned for high technology industrial area.

Table 2 : Country of Origin and Location in Kedah

Location	Country Origin						
	Jap an	Taiw an	Kore a	USA	United Kingdo m	Cana da	Singap ore
Darulaman	1	-	-	-	-	-	-
Sungai	2	1	1	1	1	-	1
Petani	2	-	-	1	-	-	-
Bakar Arang	1	2	-	-	-	1	-
Tikam Batu	7	1	1	1	1	-	-
Kulim	1	-	-	-	-	-	-
Kulim High Tech							
Total	14	4	2	3	2	1	1

Reasons for Investment in Kedah

The most important factor that attracts foreign investors to invest in Kedah is the government incentives, agreed by more than 40 per cent of the firms (Table 3). Government incentives are particularly crucial since Kedah is considered among the poorest state in Malaysia and the government is always trying to reduce imbalances in regional development.

Table 3: Choose Kedah State for Investment Location

Area	Percentage
Government Incentives	44.4
Political Stability	-
Economics Performance	29.6
Infrastructure and Facilities	-
Raw Materials	25.9
Labour Force	-
Other Reasons	22.2

Among the various incentives granted by the government, two types are more commonly given to the responding firms, as shown by Table 4. Pioneer status is given to 44.4 per cent of the firms while 48.4 per cent receives investment tax credit. Other incentives granted include export incentive (14.8 per cent), location incentive (3.7 per cent), non-fiscal incentive (7.4 per cent), and other fiscal incentives (11.1 per cent). External factors, over which the country and the state had little control, also have strongly influenced the flow of FDI firms into the state. These factors include currency fluctuation and competition from other location for investment.

Table 4: Type of Government Incentive

Type of Incentive	Percentage
Pioneer Status	44.4
Investment Tax Credit	48.4
Labour Utilization Relief	-
Export Incentive	14.8
Location Incentive	3.7
Other Fiscal Incentive	11.1
Non-Fiscal Incentive	7.4

Size and Type of Investment

Foreign companies in Kedah are generally small in size. Table 5 shows the size of investment by the amount of initial investment of started production. 22 companies (81.5 per cent) started with 10 million and less. However, in 1997, only 15 of the firms own the same amount of fixed assets. Comparing Table 5 and Table 6, the increase in assets ownership generally occurs in almost all of the firms, but it is particularly evidence for the Japanese firms.

Table 5: Initial Investment of Started Production

Started Production (millions)	Country Origin						
	Japan	Taiwan	Korea	USA	U. Kingdom	Canada	Singapore
Less than 1	1	-	-	1	-	-	1
1 - 5	7	4	1	2	1	1	-
6 - 10	2	-	1	-	-	-	-
11 - 15	1	-	-	-	-	-	-
16 - 20	1	-	-	-	1	-	-
21 - 30	-	-	-	-	-	-	-
31 - 40	1	-	-	-	-	-	-
41 - 50	-	-	-	-	-	-	-
Above 50	1	-	-	-	-	-	-
Total	14	4	2	3	2	1	1

Table 6: Amount of Fixed Assets, 1997

Fixed Assets (millions)	Country Origin						
	Japan	Taiwan	Korea	USA	U. Kingdom	Canada	Singapore
Less than 1	-	1	1	-	-	-	-
1 - 5	3	1	-	1	1	1	1
6 - 10	4	1	-	-	-	-	-
11 - 15	2	-	1	1	-	-	-
16 - 20	-	-	-	1	-	-	-
21 - 30	-	1	-	-	1	-	-
31 - 40	1	-	-	-	-	-	-
41 - 50	1	-	-	-	-	-	-
Above 50	3	-	-	-	-	-	-
Total	14	4	2	3	2	1	1

The most popular type of manufacturing activity by the firms is the production of electrical and electronic components and products. Table 7 shows the breakdown of the firms by type of activity. It shows that eight firms are engaged in the production of electrical and electronic product, six in chemicals and chemical products, and there are four each in fabricated metal and non-metallic mineral production.

Table 7: Types of Firm's Product

Firm's Product	Country Origin						
	Japan	Taiwan	Korea	USA	U. Kingdom	Canada	Singapore
Chemical	1	-	-	2	2	-	1
Non-Metallic	4	-	-	-	-	-	-
Electrical	2	3	1	1	-	1	-
Basic Metal	-	1	1	-	-	-	-
Fabricated Metal	4	-	-	-	-	-	-
Other	3	-	-	-	-	-	-
Total	14	4	2	3	2	1	1

The breakdown reflects the emphasis given by Malaysian government for export-oriented manufacturing activities indirectly prescribed in the IMP and government policies for FDI.

Equity and Control

Referring to Table 8, majority of the companies are private limited companies. Japan dominates this type of legal organization with its 13 companies. This main choice was done with reasons on the size of capital they have, efficiency in management and operational controls and capability of gaining greater economic merits.

Table 8: Type of Legal Organization

Legal Organization	Country Origin						
	Japan	Taiwan	Korea	USA	U. Kingdom	Canada	Singapore
Individual Proprietorship	-	-	-	-	1	-	-
Partnership	-	2	-	-	-	-	-
Private Ltd. Co.	13	2	2	3	1	1	1
Public Ltd. Co.	1	-	-	-	-	-	-
Total	14	4	2	3	2	1	1

With respect to the ownership distribution on capital invested, Table 9 shows that for the category of 70 per cent and more of the equity held by local partners, about 57 per cent of the respondent firms were involved in the year 1996 and 1997. For the same category (70 per cent or more of equity) held by foreigners, about 74 per cent of the foreign companies were involved in 1996 and there was an increase to about 78 per cent in 1997. From general observation, there was a favourable distribution in the context of the Malaysian equity.

In terms of equity restructuring by foreign firms, Table 10 shows that 55.6 per cent of the foreign companies had done so between the time of their establishment and the date of reporting. However, out of the total percentage, most firms have no plan to do so in future. All the companies, regardless of whether restructuring they had undergone or not in their ownership structure, had put reasons on government policies and improvement as reasons for their actions as indicated in Table 11. Other reasons include matters of management and operational controls, profitability and trustworthiness. For firms with equity restructuring, 22.2 per

cent put it on improvement while 11.1 per cent had done it due to government policies.

Table 9: Distribution of Ownership on Capital Invested, 1996 and 1997

Distribution (Millions)	Percentage			
	Local		Foreign	
	1996	1997	1996	1997
11 - 20	11.1	7.4	3.7	-
21 - 30	11.1	11.1	11.1	11.1
31 - 40	3.7	7.4	-	-
41 - 50	-	3.7	3.7	7.4
51 - 60	7.4	3.7	7.4	3.7
61 - 70	3.7	3.7	-	18.5
71 - 80	3.7	7.4	14.8	-
81 - 90	-	7.4	-	7.4
More than 90	59.3	48.2	59.3	51.9

Table 10: Equity Restructuring by Firm

Equity Restructuring	Percentage	
	Since Established	In the Future
Yes	55.6	7.4
No	44.4	92.6

Table 11: Reason for Equity Restructuring in the Firm since its Establishment

Equity Restructuring	Percentages		
	Government	Improvement	Others
Yes	11.1	22.2	22.2
No	7.4	22.2	14.8

Marketing

In the aspect of marketing (Table 12), the highest number of foreign companies that export their finished products to other countries is nine or 33.3 per cent (which can be seen in the range of 91-100 per cent of the finished products). But (in the same range) the highest number of the companies that sell in domestic market is five or 18.5 per cent only. In fact the export-oriented type of foreign investment becomes important as they give contribution to the economic growth of the state. Most of the products were exported to Asian countries, Europe and the United States.

Management and Profitability

In the aspect of the foreign firms' management practices, decision-makings by their parent firms are apparent in many areas. As expected, all the companies need approval from their parent firms to make decision regarding capital investment. It is followed by the need of approval in the areas of financial loan and approval of appointment to Board of Directors with 63 per cent each, as can be seen in Table 13. Nevertheless, foreign firms in the sample survey are obviously independence in the sense that they could make own decision on Product Change and Diversification, as indicated with 3.7 per cent. This is possibly due to the belief that their products should meet local specification. Other areas in which approval from parent firms are needed can be referred to the same table too.

Table 12: Marketing of Finished Product

Percentage	Location (Number)		
	Sold Locally	Export	
		Parent Country	Other Countries
1 - 10	3	3	5
11 - 20	3	3	6
21 - 30	1	1	3
31 - 40	5	6	2
41 - 50	3	3	2
51 - 60	3	2	5
61 - 70	1	1	1
71 - 80	4	4	4
81 - 90	5	1	5
91 - 100	5	5	9

Table 13: Approval from Parent Firm to Make Decision

Area	Percentage
Capital Investment	100.0
Financial Loan	63.0
Product Change and Diversification	3.7
Appointment to Board of Directors	63.0
Pricing Policy	40.7
Disposition of Profits	59.3
Export Market Development	55.6
Domestic Market Development	44.4
Production Volume	33.3

From the sample survey of FDI, it seems that foreign firms are making reasonable profits. As shown in Table 14, there is quite a fair distribution in terms of number of companies that earned net profit for the whole range of profit in 1996 and 1997. Ten companies in the year 1996 and 11 companies in following year had value of profit ranging from one to five million Malaysian ringgits.

Table 14: Firm's Net Profit After Tax

Range of Profit (millions)	Year	
	1996	1997
Less than 1	8	8
1 - 5	10	11
6 - 10	9	8

2. The Effects of FDI

Employment

At the beginning of initial production of the companies, as shown by Table 15, most of them employed the number of workers in the range 1 to 100 or less. Japanese companies had taken the most number of workers.

Table 15: Initial Labour Force of Started Production

Initial Labour	Country Origin						
	Japan	Taiwan	Korea	USA	U. Kingdom	Canada	Singapore
1 – 100	8	2	2	3	1	1	1
101 – 200	3	2	-	-	1	-	-
201 – 300	2	-	-	-	-	-	-
301 – 400	1	-	-	-	-	-	-

As shown by Table 16, most of these foreign firms provide more jobs opportunities in the production side, either in skilled or unskilled category and the workers were employed on a full time basis only. In 1996 the total number of full time workers employed by the respondent firms were 11,649, and it increased to 12,280 in 1997. In term of composition, the majority of the workers employed in the year 1996 and 1997 were local, where they constituted 96.6% of the total in 1996 and 96.9% in 1997. Most of these locals were employed in the manufacturing or production category followed by the professional and technical category. In two consecutive years, 1996 and 1997, 83.4% and 82.3% of the total workers were employed in the production category. All these evidence are consistent with the government's expectation that FDI should bring in more employment opportunities for locals and also to improve local skills and expertise.

Table 16: Labour Force by Category, Type, and Origin, 1996 and 1997 (Number)

Category	Type		Origin			
	Full time		Local		Foreign	
	1996	1997	1996	1997	1996	1997
Professional & Technical	619	719	583	691	25	28
Administrative & Managerial	519	582	505	575	7	11
Clerical	477	531	481	540	0	1
Sales	26	55	30	67	0	1
Services	287	290	287	290	0	0
Production : Skilled	2652	2723	2652	2773	0	0
Unskilled	7069	7380	6715	6967	364	336
Total	11649	12280	11253	11903	396	377

Table 17 shows the gender and ethnic composition of local labour force. In terms of sex, female workers made up the majority of the workers. The percentage of female workers is slightly higher in 1996 but the difference is bigger in 1997 compared with male workers. It is related to the type of

workers in the manufacturing industries where most of the workers in the production side are women. In terms of ethnic composition, Malays have domination over other groups in employment that is consistent with the ethnic composition in the state population.

Table 17: Distribution of Local Labour Force by Sex and Race, 1996 and 1997 (percentage)

Year	Sex		Race			
	Male	Female	Malay	Chinese	Indian	Others
1996	43.5	56.5	63.4	6.2	16.1	17.3
1997	33.4	66.6	63.2	6.2	17.4	13.2

Technical Expertise

Generally, foreign experts are sent before production commences in order to get the firm ready for production and supervise initial production run especially in the design and prototyping and basic processing areas (see Table 18). This is admitted by 66.7 percent of the respondents. However a small number of foreign experts were employed, ranging between 1 - 10 person. Most of them stay here for a period of 1 - 6 months. There are employed for a short span of time because local experts who have gained the necessary skill through in-service training conducted by the respective firms gradually replace them. Table 19 shows the detail of information regarding the number and duration of stay in Malaysia of foreign technical experts.

Table 18: Type Of Technical Experts

Type	Percentage
Research & Development	25.9
Design and Prototyping	55.6
Product Development	18.5
Basic Processing	37.0
Others	22.2

Table 19. Technical Expertise

	Range	Percentage
Number of Experts	0	3.7
	1 - 10	85.2
	11 - 20	7.4
	More than 20	3.7
Duration (month)	1 - 6	74.1
	7 - 12	11.1
	More than a year	14.8

Training

Apart from generating employment opportunity, foreign firms also have a favourable impact on the local economy if they help to train the local workers and then help build up a pool of skilled manpower. Development of skills is considered to be one of the most important aspects of development and the transplanting of skills is considered to be one of important external effects of foreign investment. Skill development can be achieved through training scheme activities for local workers. Survey has shown that most firms provided in-service training for management, foreman production and supervisory work in their companies or local institutions. A small percentage of firm, ranged from 3.4 - 7.4 per cent, have given pre-service training and continuing education to their workers. Meanwhile, almost 30-37 per cent of the overall firms has not given any training to their workers (Table 20). This percentage is considered slightly high. It describes the firm's lack of concern about the importance of training or the government's objective in encouraging foreign investment to increase local experts. Some of the firms also send their local workers to get training abroad to gain exposure and learn the current technology of production.

Table 20: Training Opportunities by Type of Workers, Training, and Place, 1997

Type of Workers	Type of Training				Place of Training	
	Pre-Service Training	In-Service Training	Continuing Education	Nil	Local	Abroad
Management	7.4	51.9	3.7	37.0	55.6	25.9
Foreman Production	7.4	55.6	0.0	37.0	55.6	37.0
Supervisory Worker	3.7	63.0	3.7	29.6	63.0	29.6

Table 21 below shows a small number of foreign firms, 22.2 percent, provide training for outsiders, mainly to local suppliers and distributors. The training was undertaken to ensure appropriate level of quality, reliable delivery, after-sales service, and so on. Thus, this kind of training aims on promoting and developing more effective channels for marketing, distributing, and servicing the products.

Table 21: Training for Local Supplier Firms and Distributors, 1997

Response	Percentage
Yes	22.2
No	77.8

Linkages

From Table 22, it can be seen that the value percentage of materials and services supplied by local firms to these foreign companies are low. Only 33.3 per cent of the companies have a range of 51 – 100 per cent of input supplied by local firms, compared to 66.6 per cent companies admitted to having 1 – 50 per cent of input supplied by local firms. Therefore, the government should focus their effort on encouraging the use of local materials and services by these foreign companies. Besides helping the development of local firms, this action can spur the production of local components, which are currently still being imported.

However, the establishment of strong linkages between foreign companies and local suppliers encounters problems because some of the firms still need to import raw materials. The reason for importing raw materials is because they are not available locally or local material is not suitable (Table 23). As a result, some firms use a high proportion of imported materials. However, some of them (51.8 percent) prefer to use locally produced component because of several reasons, namely to reduce cost, to encourage local manufacturing companies, increase local content and other reasons (Table 24).

Table 22: Suppliers of Materials and Services

Range of Total Requirement (%)	Supplier (percentage)		
	Local firm	Parent Company	Others
1 - 10	33.3	40.7	51.9
11 - 20	0.1	22.2	3.7
21 - 30	7.4	11.1	14.8
31 - 40	3.7	7.4	3.7
41 - 50	22.2	7.4	3.7
51 - 60	3.7	3.7	14.8
61 - 70	11.1	0.1	3.7
71 - 80	3.7	0.0	0.0
81 - 90	3.7	0.0	0.0
91 - 100	11.1	7.4	3.7

Table 23: Reasons for Import Requirement

Reasons	Percentage
Local suppliers:	
not available	55.6
not price competitive	18.5
materials not up to quality	40.7
specification	7.4
other reasons	

Table 24: Using Locally Produced Components

Reasons	Percentage
Reduce cost	14.8
Meet quality standard	3.7
Competitive and meet specification	3.7
Fast delivery	3.7
Increase local content	7.4
Support local economic growth	3.7
Reduce import activities	3.7
Encourage local manufacturing companies	11.1

There are two ways of establishing linkages, direct or indirect, between foreign firms and local suppliers and local distributors. The firms admit both relationships where 48.1 percent responded yes to local suppliers' involvement and 44.4 percent responded positively to local distribution involvement. Besides the increment in the usage of local materials in production, the linkages between foreign firms and local suppliers and distributors also encourage local entrepreneurs, and 55.6 percent of the respondents agreed to this statement.

Transfer of Technology

The transfer of technology via direct investment can be analyzed based on two aspects, transfer of machinery and equipment, and transfer of skill. The transfer of skill has already been discussed earlier. Meanwhile, the transfer of machinery and equipment involves the adaptation of appropriate technology in respect of production equipment and production techniques suitable to the local environment. The characteristic of adaptation of machines and equipment are based on the origin of machine, condition of machine, and condition of purchased.

Table 25 shows that most of the machines originated from Japan followed by USA. The reason is because most of the foreign firms surveyed are Japanese-owned and their tendency and heavy reliance on Japanese products may be due to their price competitiveness as well as the bias of most Japanese managers. Furthermore, non-Japanese firms are also using Japanese machinery. It seems that Japanese technology has significant influence on the industry environment in Kedah. It is possible that Japanese technology has been transferred compared to other foreign technology.

Table 25: Country Origin of Machines

Name of Country	Percentage
Japan	33.3
USA	22.2
United Kingdom	14.8
Taiwan	14.8
Korea	14.8

Based on the five models of machines used in the production process, most of the firms have a tendency to use either the intermediate or the latest model especially for the most important machines in production (Table 26). However, older models are used concurrently. Most of the machines used

are either fully automatic or semi-automatic. Therefore, most of the foreign companies tend to use the most up-to-date and new machines in terms of model and automation. This is beneficial for local workers since they have the opportunity to work with sophisticated and high technology machines. The reason for the purchase of new machines may be because of reinvestment allowance (RA) given by the federal government.

Table 26: Model and Automation

Machine	Model			Automation		
	Oldest	Intermediate	Latest	Fully Automatic	Semi - Automatic	Manual
Model 1	25.9	37.0	44.4	63.0	51.9	0.0
Model 2	29.6	37.0	37.0	55.6	51.9	3.7
Model 3	25.9	33.3	37.0	51.9	44.4	3.7
Model 4	40.7	33.3	25.9	48.1	40.7	3.7
Model 5	40.7	25.9	25.9	44.4	33.3	3.7

Furthermore the firms provide training on how to operate these machines. The length of training provided by most firms is 1 - 3 months for the most difficult production process (Table 27).

Table 27: Length of Training Required

Length	Percentage
Less than 1 month	7.4
1 - 3 months	25.9
4 - 6 months	3.7
7 - 9 months	11.1
10 - 12 months	3.7
2 years and above	3.7

CONCLUSION AND POLICY IMPLICATIONS

The major finding of our paper is that FDI has actually made a positive contribution to economic development of Kedah State. As mentioned earlier, industrialization programme in the state is important to accelerate its economic growth besides transforming its pattern of economy. The contribution is reflected in the characteristics and the effects of FDI in the state.

The role of FDI is obviously seen in the manufacturing sector in the state. Their activities seem to be concentrated in the subsectors of chemical, non-metallic, electronic and electrical, basic metal, and fabricated metal. These are in line with the KDAP. The KDAP identifies seven "high growth potential" subsectors, namely, rubber-based, electrical and electronic, wood-based, plastic, textiles, food processing and metal fabrication. These industries are performing well and continuously expanding which can bring many benefits to the local economy. The benefits among others are increasing employment opportunities, encouraging local manufacturing activities, increasing local content in product, and supporting local economic growth.

Linkages are important in the development of indigenous technology by increasing the capability to adopt, adapt, and improve in technical aspects. Through FDI, it is hoped that these linkages will be created and thus can help boosting the state's industrialization programme. The establishment of Kulim Hi-Tech Industrial Park is one of the government's efforts to spur the growth of high technology industries. This Park is expected to be high technology centre for the nation of Malaysia and serve as a national Research Development Centre. More importantly, it has a highly advanced industrial environment created for potential investors.

In brief, findings in this study have several policy implications such as follows:

1. Infrastructure facilities have to be improved and strengthened in order to attract foreign companies to invest in all industrial areas regardless of their locations in the state.
2. Maintaining and increasing competitiveness of well-trained labour force should be strongly emphasized.
3. Foreign firms and government agencies should increase their joint efforts in providing various training programmes in order to improve skills of labour force.
4. High quality materials and services supplied to foreign companies by local suppliers and distributors have to be ensured.
5. In management practices, the degree of dependency on parent companies in terms of decision-making should be lessened. Currently, most foreign companies still heavily relied on their parent companies abroad especially in the financial matters and the appointments at top-level management position.
6. With respect to the marketing in general, it is found that, 77.8 per cent of the foreign companies have a range of 65 per cent and above of their finished products exported to overseas. It shows a good achievement of the government policy of export-orientation. However, the level of achievement still can be further improved in future.

To conclude, foreign direct investment really plays important role in the economic development of Kedah. Realizing the Vision 2020 which is to propel Malaysia to become an industrialized country in the year 2020, the state is now continuing its efforts to further promote foreign investors in various type of investment activities in all industrial areas.

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